

Application No. 10/692,917

Reply to Office Action

*REMARKS**Discussion of Claim Amendments*

New claims 25-26 have been added and are supported by the specification, e.g., paragraph [0013] at page 4. No new matter has been added.

*The Office Action*

The rejected claims have been rejected under 35 USC 103(a), as allegedly unpatentable over either Zhu et al. (USP 6,221,933), Wu et al. (US 2003/0144375), or Hosoi et al. (US 2003/0227531) as the primary reference, in combination with one or more of Mead et al. (USP 5,596,027), Elmer et al. (US 2005/0101694), Santilli et al. (USP 5,738,716), and Marshall et al. (USP 5,275,646), as secondary references.

*Discussion of Rejections*

Applicants respectfully traverse the rejections for the reasons discussed below.

1. Rejections where Elmer et al. is a reference

Elmer et al. is not competent prior art. Elmer et al. published May 12, 2005 from an application filed November 3, 2004, and claims the benefit of two provisional applications, the earlier of which has a filing date of November 3, 2003. The present application was filed October 24, 2003, which is prior to the earliest claimed US priority date of Elmer et al. Applicants are not admitting or denying that Elmer et al. is entitled to the claimed priority dates. Even assuming, *arguendo*, that Elmer et al. is entitled to the claimed priority dates, Elmer et al. cannot be prior art under Section 102. If a reference, as here, does not qualify under Section 102 as prior art, it cannot be applied in an obviousness rejection. In view of the foregoing, all rejections where Elmer et al. is used as a reference must fall. Thus, the rejections set forth at page 3, numbered paragraph 4, to page 10, lines 1-2, of the Office Action must fall. The present invention is clearly patentable over the remaining cited references (i.e., minus Elmer et al.).

Application No. 10/692,917

Reply to Office Action

## 2. Other Rejection

The only rejection not involving Elmer et al. is at numbered paragraph 11 at page 10 of the Office Action. Thus, claims 1-11, 13-15, and 17-24 are rejected as allegedly unpatentable over Wu et al. in view of Mead et al. and Marshall et al.

To establish a *prima facie* case for obviousness, the Office Action must satisfy three requirements: (1) the prior art reference or combination of references must teach or suggest *all the limitations* of the claims. See *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970) ("All words in a claim must be considered in judging the patentability of that claim against the prior art."); (2) the prior art relied upon must contain some suggestion or incentive, coupled with knowledge generally available in the art at the time of the invention, that would have motivated those of ordinary skill in the art to modify a reference or combine the references. See, *Karsten Mfg. Corp. v. Cleveland Gulf Co.*, 242 F.3d 1376, 1385, 58 USPQ2d 1286, 1293 (Fed. Cir. 2001) ("in holding an invention obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in a way that would produce the claimed invention."); and (3) the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. In other words, hindsight analysis is not allowed. See *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991) ("While the idea of using a monkey gene to probe for a homologous human gene may have been obvious to try, many pitfalls existed that would have eliminated a reasonable expectation of successfully obtaining the EPO gene. Hindsight is not a justifiable basis on which to find that ultimate achievement of a long sought and difficult scientific goal was obvious.").

The Office Action has failed to show that the prior art teaches *all the limitations* of the claimed invention. The Office Action admits that Wu et al. fails to disclose the use of a hydrophobic conductive agent. The Office Action alleges that Wu et al. discloses an ink jet ink composition which contains, among others, 0.1-10% polyamine, and refers to line 18, paragraph 140 of the cited reference. Applicants respectfully submit that the Office Action is in error. At line 18, paragraph 140, Wu et al. discloses polyamine/fatty acid condensation polymers (as an example of a dispersant). Polyamine/fatty acid condensation polymers are not polyamines but are polymers produced by the condensation of a polyamine and a fatty

Application No. 10/692,917

Reply to Office Action

acid. Those skilled in the art would read this disclosure to mean that the amine groups of the polyamine react (or condense) with the acid groups of the fatty acid, and as a result, to form amide bonds. As such, these condensation polymers belong to the family of *polyamides*, which are quite different from polyamines. Thus, Wu et al. not only fails to disclose the use of a hydrophobic conductive agent in an ink jet ink composition, as conceded by the Office Action, but, contrary to the Office Action's assertion, also fails to disclose the use of a polyamine in an ink jet ink composition.

Therefore, even if Wu et al., Mead et al. (which has been cited for disclosing an acidic resin), and Marshall et al. (which has been cited for disclosing a hydrophobic conductive agent), the combination does not suggest to those of ordinary skill in the art the presently claimed invention, which requires, among others, that a polyamine *and* a hydrophobic conductive agent must be present in the ink jet ink composition.

Moreover, Marshall et al. teaches away from the presently claimed invention, e.g., against the use of MEK or large amounts of organic solvents. Marshall et al. teaches ink jet ink compositions consisting essentially of polymerizable monomers. Marshall et al. teaches that "*no methanol, ethanol, MEK or other such low molecular weight organic solvent is required*" (abstract) (*Emphasis added*). Proceeding contrary to the accepted wisdom in the art represents strong evidence of unobviousness. See, e.g., *In re Hedges*, 783 F.2d 1038, 1041, 228 USPQ 685, 687 (Fed. Cir. 1986); *W. L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1552, 220 USPQ 303, 312 (Fed. Cir. 1983). Therefore, there is no motivation to combine Marshall et al. with Wu et al. and Mead et al. Further, since Marshall et al. teaches away from the use of organic solvents, there is no reasonable expectation of success in arriving at the claimed invention.

In view of all of the foregoing, the obviousness rejection is erroneous and should be withdrawn.

As regards claims 25-26, there is no suggestion or incentive in the cited references that would motivate those of ordinary skill in the art to modify a reference or combine the references to arrive at the claimed invention. As discussed, Wu et al. fails to teach a polyamine and a hydrophobic conductive agent.

Moreover, Wu et al. and Mead et al. disclose mainly aqueous ink jet ink compositions; see title and paragraphs 83-87 at pages 4-5 of Wu et al. and col. 4, lines 38-39 and Examples 1-3 at col. 15-16. Marshall et al. teaches ink jet ink compositions consisting

Application No. 10/692,917

Reply to Office Action

essentially of polymerizable monomers. Marshall et al. teaches that “*no methanol, ethanol, MEK or other such low molecular weight organic solvent is required*” (abstract) (*Emphasis added*). Thus, the liquid phase of the ink composition is a polymerizable monomer such as those having acrylic, vinyl or epoxy functional groups, which are capable of being cured by UV radiation. The droplet printed on the substrate cures and becomes a dry film or dot.

To arrive at the claimed invention, those of ordinary skill in the art must take the water-based ink compositions of Wu et al. and convert that into an organic solvent-based ink composition. There is no suggestion in Wu et al. for making that change. There is no incentive in Wu et al. for making that change. In fact, there is only a *disincentive* for making such a change. See paragraph 0003 at page 1 of Wu et al.: “Many inks currently used in ink jet printers are either water-based or solvent-based. Of these, water-based inks have been widely accepted in the printing industry due to their environmentally friendly attributes”.

There is also no suggestion or incentive in Mead et al. for making that change. Moreover, suggestion for making the proposed change would be against the express teachings of Wu et al. and Mead et al., since both of these references point the skilled artisan to water-based inks. Motivation cannot be derived from applicants' specification. It is improper to “use that which the inventor taught against its teacher”, *W.L. Gore*, 721 F.2d at 1553, 220 USPQ at 312-313. Using an applicants' disclosure as a blueprint to reconstruct the claimed invention from isolated pieces of the prior art contravenes the statutory mandate of Section 103 which requires judging obviousness at the point in time the invention was made. See *Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

Further, even if the art could be modified somehow, the fact that the art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. See, *In re Laskowski*, 871 F.2d 115, 117, 10 USPQ2d 1397, 1398 (Fed. Cir. 1989); *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-1784 (Fed. Cir. 1992). Here, there is nothing in the cited references to suggest the desirability of the modification, particularly; there is no suggestion in the cited references that an organic solvent-based ink is desirable.

In view of the foregoing, applicants respectfully submit that the claims are patentable over the cited references.

Application No. 10/692,917

Reply to Office Action

*Conclusion*

If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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Xavier Pillai, Reg. No. 39,799  
LEYDIG, VOIT & MAYER, LTD.  
Two Prudential Plaza, Suite 4900  
180 North Stetson Avenue  
Chicago, Illinois 60601-6780  
(312) 616-5600 (telephone)  
(312) 616-5700 (facsimile)

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